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June 26, 2019

Via ECFS

Marlene H. Dortch
Secretary, Federal Communications Commission
445 12th Street SW
Washington, D.C. 20554

Re: *Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. §160(c) to Accelerate Investment in Broadband and Next-Generation Networks*,
WC Docket No. 18-141

Dear Ms. Dortch:

Customers today regularly switch between TDM and IP (or from copper to fiber) without significant impact or repercussions. Indeed, the FCC has previously found that these types of transitions are permitted, have “been ongoing for many years now” and indeed, that wholesale customers “have had ample notice” that their end users may need to transition away from legacy copper loops.¹

Although some may claim otherwise,² in our experience, these transitions are routine and smooth. Below, we explain that should the FCC grant the USTelecom Petition, forbearance from these obligations does not necessarily mean that customers will be obliged to switch from TDM services to IP.³ Next, we discuss our experience in transitioning customers from copper facilities to fiber ones. We explain that while customers, particularly residential customers, can keep their TDM POTS over fiber, many elect to transition to IP. We also explain that in both cases, the transition is straightforward, not disruptive, and that customers continue to be able to use existing equipment such as faxes, medical monitoring equipment, and alarms over either. Third, we explain how, based on these experiences, we believe

¹ *Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment*, Report and Order, Declaratory Ruling, and Further Notice of Proposed Rulemaking, 32 FCC Rcd 11,128, ¶¶ 33, 63 (2017).

² See, e.g., Ex Parte Letter from U.S. TelePacific Corp., *et al.*, WC Docket Nos. 18-141, 17-144, 16-143 & 05-25, at 1 (June 17, 2019); Ex Parte Letter from Granite Telecomm’cns, *et al.*, *Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. § 160(c) to Accelerate Investment in Broadband and Next-Generation Networks*, WC Docket No. 18-141, at 1 (June 14, 2019).

³ See USTelecom Petition, *Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. § 160(c) to Accelerate Investment in Broadband and Next-Generation Networks*, WC Docket No. 18-141 (May 4, 2018) (“USTelecom Petition”).

customers that subscribe to a forbore service also could transition services with minimal disruption or operational effect. We walk through what a transition would look like for different types of arrangements, and we explain why assertions of unreasonable hardship are unfounded.

1. *Forbearance From Resale and UNE Obligations Does Not Necessarily Mean IP is the Customer's Only Choice*

As a threshold matter, forbearance from resale and UNE obligations will not necessarily mean end users must migrate from a TDM to an IP-based service. Consider the following scenarios:

- Scenario 1: A CLEC uses 251(c)(4) resale to sell POTS to its end user customers. If the FCC forbears from 251(c)(4) resale, the CLEC can choose from a resale arrangement of the same POTS service pursuant to 251(b)(1) with the ILEC or purchase UNE-P commercial replacement arrangements from the ILEC. In both cases, the CLEC's end user customers remain on a TDM-based service and would not be required to migrate to a VoIP service.⁴
- Scenario 2: A CLEC purchases DS1 or DS3 UNEs. If the FCC forbears from DS1 and DS3 UNE obligations, the same TDM-based DS1 or DS3 service would simply be sold at a market based rate (e.g., Business Data Services (BDS) circuits at the BDS rate), and thus the end user has no change in service.
- Scenario 3: A CLEC purchases analog DS0 loops on an unbundled basis. If the FCC forbears from unbundling obligations, the CLEC may migrate the unbundled loops to a commercially negotiated UNE-P replacement arrangement or a 251(b)(1) resale arrangement. In this case, the end user would migrate from one TDM-based arrangement to another.
- Scenario 4: A CLEC purchases digital⁵ DS0 loops on an unbundled basis to provide IP-based services (e.g. Ethernet over copper or broadband Internet access). Upon FCC forbearance, the CLEC would be able to choose from various IP-based services offered by Verizon including Ethernet, low-price low-speed Ethernet or fiber to the Internet (where available) and thus the end users' services would be migrated from IP to IP, and end users generally have no need to change equipment.

CLECs, of course, can also self-provision their own TDM-based services and/or obtain such services from alternative providers, also meaning that often there is no change for end users, or an end user may change their router if the CLEC elects cable service.

⁴ Of course, ILECs have incentives to negotiate with and keep their CLEC customers. Furthermore, UNE-P commercial replacement arrangements are typically less expensive than a 251(c)(4) resold line.

⁵ Digital DS0 UNE loop also include xDSL capable DS0 loop.

2. *The Well-Established Copper to Fiber Migration Process Shows That End Users Are Not Unreasonably Affected by the Type of Transitions That May Occur Post-Forbearance*

Even in instances where end users may need or choose to migrate services from TDM to IP, Verizon's experience in migrating customers who make the same choice as part of a transition from copper to fiber facilities shows that the change is neither disruptive nor difficult. While Verizon offers TDM services such as POTS over fiber, many customers whose copper is retired choose IP alternatives. And, despite that shift, customers do not generally face significant operational impact from the transition. Below are examples of the kinds of transitions customers regularly make and the processes:

Retail Customers: Verizon works closely with our retail customers to ensure a smooth transition from copper to fiber. We provide customers with multiple notifications of copper retirement and the need to migrate. Once a customer places an order, Verizon installs the necessary equipment and reconnects the customer's existing wiring. For example:

- After Verizon and the customer review the available options, a retail end user subscribing to POTS may choose to migrate to TDM POTS over fiber or to VoIP. TDM POTS over fiber offered as part of Verizon's technology transition initiative offers the same functionality, terms, and conditions as POTS over copper. After the customer places a migration order, a Verizon technician physically installs new terminal equipment at the customer's premise if necessary and reconnects the customer's existing wiring equipment to Verizon's fiber network.⁶
- A retail customer choosing to migrate to a VoIP service over fiber has a similar process: Verizon reconnects the customer's wiring to the same optical terminal equipment and then makes the necessary changes at its central office to convert the traffic to IP signaling. In our experience, retail customers migrating to an interconnected VoIP service such as Verizon's Fios Digital Voice have the same or an even better experience than customers with traditional POTS, and customers may continue to use fax machines, credit card machines, medical monitoring devices, or alarms with their VoIP service.⁷

Wholesale Customers: Verizon also works closely with our wholesale customers to help their end users transition from copper to fiber. While we depend on wholesale customers to interact with their end users during a migration, we have also found that typically both wholesale customers and end users readily migrate their services from copper to fiber (and often to IP services as part of the process). Once a wholesale customer places an order to migrate to fiber, Verizon fulfills that order by installing any necessary equipment and

⁶ Typically, the technician would install an optical network terminal (ONT) at the customer's premise and connect the customer's existing phone lines to the ONT.

⁷ Verizon Ex Parte Letter, *Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment*, WC Docket No. 17-84 (Apr. 26, 2018).

reconnecting the end user customer's existing premises wiring. The impact to the end user is generally minimal and not disruptive. For example:

- Resale: When Verizon migrates a voice resale circuit⁸ from copper to fiber, the wholesale customer places an order to convert the copper circuit to fiber. Verizon installs the optical terminal equipment at the end user customer's premise and reconnects the end user customer's wiring to the new optical equipment. The wholesale customer coordinates scheduling with its end user and there is no operational impact to the end user customer who will continue with the same service.
- DS1 UNEs: We coordinate with the wholesale customer's end user to install new optical network terminal equipment at the end user's premise and then reconnect the end user's wiring from the customer's multiplexing equipment to the new optical terminal equipment (Verizon coordinates with the wholesale customer and end user any down time required for the rewiring). The end user can continue getting TDM service over fiber, migrate to another service, or may choose to upgrade to an IP-based services such as Ethernet.
- Analog DSO UNEs: Wholesale customers can – and frequently do - migrate analog DSO UNEs to commercial UNE-P replacement arrangements or to a 251(b)(1) resale arrangement. Both replacement arrangements are also TDM-based. The customer submits a migration order for each end user to convert those UNEs to the replacement arrangements on fiber. Because under a commercial UNE-P replacement arrangement Verizon performs the switching functionality, Verizon ports the telephone numbers associated with each of those UNEs to Verizon, and then installs the replacement arrangements on fiber by placing the optical network equipment at the end user customer's premise and moving the end user's inside wire to the new fiber equipment.
- Digital DSO UNEs: Migrating digital DSO UNEs from copper to a fiber-based service such as Ethernet entails the wholesale customer placing an order for a new fiber-based service and another order to disconnect the copper-based UNE. Depending on the end user's service and existing equipment, the end user may need to modify its equipment for compatibility with the new IP-based service but often does not. For example, based on our experience, if the end user purchases Ethernet over copper that uses digital DSO UNEs, the end user is able to migrate to native Ethernet provided by a cable provider with little or no change to its equipment.

⁸ Nearly all 251(c)(4) resale circuits are used for voice; in the event that one is used for something else, we follow the process discussed in other parts of this letter.

3. *Regardless of What Service Wholesale Customers Switch To, End Users Are Readily Able to Migrate from Forborne Services to the Other Alternatives*

As described above, migrating wholesale customers from UNE and resale arrangements to other alternatives is straightforward and already happens regularly. Thus, should the FCC grant the USTelecom Petition, end users will not be unreasonably affected. For example:

- Resale: For resale, after forbearance, a wholesale customer would be able to migrate to a 251(b)(1) resale arrangement or, for voice services, to a commercial UNE-P replacement arrangement. Customers migrating to 251(b)(1) resale will require no equipment or other changes: the ILEC would simply modify the billing rates for the impacted circuits. In the case of a migration to commercial UNE-P replacement service, the CLEC would need to place an order to request the change, but they do not need to change any of their equipment. In either case, the end user customer experiences no operational impact from the billing change and the service remains TDM-based. An end user may also choose to discontinue service with the wholesale provider and place an order for new service with another provider such as Verizon or a cable provider. An order for retail service with Verizon would require a simple billing change. New service from a cable provider is available widely; obtaining it entails subscribing to new service from the cable provider and disconnecting service from the wholesale provider.
- DS1 and DS3 UNEs: For DS1 or DS3 loop and transport UNEs, Verizon would coordinate with the wholesale customer, who then submits an electronic request for the conversion to the commercially available alternative. Verizon then converts the records for the circuits. The migration is a record change and does not require any physical wiring or equipment installation. The change would be essentially transparent operationally to the end user. This process is similar to the well-established Special Access to UNE conversion process (albeit in the “opposite” transactional direction) that is already extensively used. An end user who chooses to migrate away from a CLEC’s post-forbearance service could easily disconnect service with the CLEC and order new service with Verizon or another provider such as cable who widely offer competitive best effort and Ethernet service.
- Analog DS0 UNEs: Following FCC forbearance, if the wholesale customer so opted, Verizon will migrate analog DS0 UNEs to resale or to a UNE-P replacement arrangement by rewiring the loop from the collocation facility to Verizon’s switch at its central office. No physical changes is generally required at the end user’s premise. As explained above, Verizon would also port the numbers for these circuits to Verizon’s network instead of the wholesale customer’s. The only operational impact to the end user would be a short amount of down time (often as little as a few minutes) coordinated with the wholesale customer. Verizon has used this well-established process for many years. An end user customer that chooses to transition away from the CLEC that used a commercially available replacement service to an alternative provider has many options. The end user customer may disconnect

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service with the wholesale provider and order a service from Verizon, cable or a wireless provider.

- Digital DS0 UNEs: Migrating digital DS0 UNEs as a result of FCC forbearance would be the same as the migration from copper to fiber as discussed above.⁹

To the unlikely extent that customers don't fall into any of these categories, following any grant of forbearance, we intend to work with them and their end users in similar ways.

* * * * *

Thus, we believe the evidence shows that customers today regularly transition between TDM and IP (or from copper to fiber) in the ordinary course, and that this type of transition will not place unnecessary or undue hardship on end users following a grant of forbearance. Please contact me if you need further information.

Sincerely,



Frederick Moacdieh

cc: Terri Natoli
Ed Krachmer
Michele Berlove
Madeleine Findley
Eric Ralph
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Billy Hupp
Mason Shefa

⁹ In areas with no fiber, special construction may apply or a customer may transition to an ILEC or cable alternative service as described above.